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Shvidanenko O.A.,  
doctor of economic sciences, professor,  
Kyiv National Economic University  
named after Vadym Hetman,  
Kyiv, Ukraine

Busarieva T.G.,  
PhD, associate professor  
Kyiv National Economic University  
named after Vadym Hetman,  
Kyiv, Ukraine

## IMPERATIVES OF THE FORMATION OF THE INFORMATION ECONOMY

*Summary.* The article is devoted to the complex analysis of the stages of formation and development of the information economy. The work presents a comparative characteristic of the industrial, postindustrial and informational society. The system characteristics that are inherent to the information economy in modern conditions are investigated.

*Key words:* information economy, formation, paradigm, technology, information.

**Formulation of the problem.** Despite the extensive conceptual base of the analyses concerning the development of the information economy, many theoretical and methodological issues remain controversial and require further clarification and justification, in particular, the imperatives of the formation of the information economy.

**Analysis of recent research and publications.** Among authors, whose works largely represent the development of modern stage of informative economy as the separate component part of economic science, it is necessary first of all to distinguish the following, such as D. Bell, T. Gryhiles, U. Dyzard, J. Martine, E. Masudu, F. Makhlop, E. Mansfield, R. Nelson, I. Nikolov, T. Stouniere, E. Toffler, J. Schumpeter, J. Ellul, A.B. And. Anchishkina, LL Veger, LM Gatovsky, LS Glyazer.

**Formulation of the aim.** The aim of this article is the exposure of the features and structural transformations of the formation of informative economy and factors of its development.

**The main material of the study.** In the modern economy the information plays a revolutionizing role, modifying practically all aspects of economic life. That's why the market economy of the beginning of the XXI century can not be described ignoring the circumstances that formed a new technological type of production - the economy, based on digital technologies, newest types of telecommunications, network information technologies. Therefore, the information resources and information - telecommunication technologies are becoming the most important sources of the growth and increasing of the level of competitiveness of the economy. In this regard, most countries link the further strategy of their development with the transition to the information economy.

The process of the formation of the information economy is a complex phenomenon associated with changes in the system of productive forces and social relations. On one hand, in the field of information technology, the positive effect of their use has been somewhat reduced. On the other hand, in the field of innovative research, information and telecommunication technologies remain in the lead. As a result of the impact of these contradictory trends and the search for the most promising options for the further development of countries, studies in the field of the formation of the information economy are becoming principal.

The central element in the theory of information economy is the concept of "information", therefore information acts as a "raw material" in the process of obtaining knowledge. At the same time, knowledge can become the basis for creating new information as a result of its replication, abstracting and dissemination, it means any knowledge turns into information, and only after perception of information by an individual it becomes knowledge, i.e. knowledge is more speculative than information.

Despite certain achievements in the theoretical researches, the theory of information economy is in the process of its formation and development. It is necessary to mention that the theory of information economy reflects the transition from an industrial society to a postindustrial one and to a society based on knowledge. In spite the fact that from the scientific point of view the theory of information economy began to be researched relatively recently (from the middle of the XX century), it has already formed its own history. A quantitative approach to the definition of the concept of "information" is fully disclosed in the works of K. Shannon, R.A. Fisher, N. Wiener, W. Ashby, A. Turing, A.N. Kolmogorov. The quality side of the phenomenon of information is considered in works of A.A. Charkevichya, Yu.A. Shredera, E.G. Yasina. It should be noted that information as the technical phenomenon is investigated enough in details, but the ground of its quality descriptions is not yet completed. The followers of the conception of post industrial development and actually informative economy are foreign scientists such as: D. Bell, P. Draker, M. Kastelie, Yo. Masuda, F. Machlup, M. Porat, T. Stounier, E. Toffler, and others. In their works the role of information and knowledge is

investigated in community development, analyzed such aspects, as socio-economic consequences of informative revolution, informative production, informative resources, mechanisms of functioning of network economy.

From our point of view, the information economy is the economy of the post-industrial development of the society in which a large part of the gross domestic product is provided by activities for the production, processing, storage and dissemination of information and knowledge. In the postindustrial economy, the traditional industry in terms of employment and share in the national product is gradually giving way to the leading place of the information economy. The main sphere of accumulation and use of the capital investments is increasingly becoming human capital, as the driving force of information resources, which are endless in nature. The comparative characteristics of the industrial, postindustrial and information society are presented in Table 1.

Table 1.

**Comparison characteristics of industrial, post-industrial and information society**

Characteristics of the society	Industrial society	Post-industrial society	Information society
Leading sector of national economy	Agriculture	Industry	Services sector
Characteristics of the society	Industrial society	Post-industrial society	Information society
Professional structure	Peasants, artisans	Workers, maintenance personnel, managers	The growth of the intelligentsia and the "technical class"
The structure of the economy	Prevailing mining activities	Traditional capital-intensive and labor-intensive industries	High-tech, information, innovative industries
The main factor of production	Ground	Capital	Information
The dominant social group	Landowners	Financial and industrial groups	Owners of the information

Source: created by authors based on [1, 383]

Analyzing the data of the table 1, it is necessary to summarize that information from the category of indirect characteristics taken into account by economic agents (through the development of industrial and post industrial society) has become the main resource, service and product (in the information society).

To determine the system characteristics of the information economy at the present stage, it is necessary to analyze the stages of the formation and development of the information economy. At the same time, it is necessary to notice that the observed information and technological breakthrough has objective prerequisites. The centuries-old evolution of the media and

communications contains truly epoch-making events, among which are the invention of a telegraph and a rotary typographic machine (1847), a telephone (1870), a radio (1895), a wireless telegraph (1922), television (1930). In 1946 in St. Louis (USA), a radiotelephone system was created, which is considered to be the ancestor of mobile communications.

Actually, the first stage of the formation of the information economy, which lasted from the mid-1950s to the mid-1960s, is characterized by the creation of technoparks in many countries (the USA, EU), whose activities were aimed on planning and managing scientific activities. Direct connections between scientific and technical developments have intensified, the use of scientific achievements in production has been accelerated. Thus, since the middle of the twentieth century, science has become a major factor in the production forces, and moreover dictates the nature of technical, organizational and structural changes. Research in this area led the American economist D. Stigler to the conclusion that for a buyer seeking, the costs of searching for market information are approximately proportional to the number of sellers. This extremely simple model was not designed to address the issues of the information economy, but nevertheless formed one of the main areas of research into the modern economy, understanding information as an economic category and a means of reducing uncertainty for economic actors.

The second stage (the second half of the 60s-70s) is characterized by the progress of computer technology and the improvement of the means of information transfer, which led to their convergence in information and communication technology, and in 1969 the first steps were taken in the development of computer communication networks, the result of which was the emergence of Internet. On the wide use of information technologies, the development of new flexible production systems was also based - the so-called "post-Fordism". The political influence of the media has also reached a new level: in the presidential election campaign of 1960 in the United States for the first time broadcast of debates between JF Kennedy and R. Nixon was shown on TV. In scientific works of this stage, there is a clear desire to literally apply the existing economic categories to the study of information production, but these attempts are far from being entirely successful. At this stage, the first, still sufficiently mechanistic, attempts to measure the quantitative parameters of information production (M. Abramovich, M. Braun, E. Denison, J. Kendrick, D. Sahal, A. Fasfeld, etc.) appear [2,p.208].

The third stage of the formation of the information economy characterizes the 70th years of the 20th century and coincides with the information revolution. At the same time, it must be said that the information revolution develops in parallel with the scientific and technological revolution. In particular, in 1973-1974 the journal "Questions of economy" organized a discussion, during which the main positions on key problems of the information economy were analyzed (the correlation of the commodity and non-commodity

nature of scientific and technical information, the objective basis of the price of information products, the peculiarities of the social form of scientific work ).

The fourth stage (1980-1990) describes the emergence and spread of Internet and the worldwide liberalization of the market, which resulted in a corresponding decline in the cost of communication services - two important factors that accelerated the development of the information sphere. It was marked by a new revival of discussions and the intensification of scientific disputes in various areas of the information production economy. During this period, there was an intensification of approaches to the production of scientific and technical information as an independent branch of the economy, so a special place was occupied by work devoted to the study of the economic efficiency of information production. This direction is associated with the names of V. Glushkov, G. Gromov, Yu. Kanygin, R. Leraire, V. Makarov, L. Mindely, E. Roberts and others.

In the early 1990s, the fifth stage of the development of the information economy began. The new stage of the scientific and technological revolution includes not only revolutionary changes in science, but also priority areas of modern scientific and technological progress: the electronization of the national economy, integrated automation, computerization and robotization of production, the development of nuclear power, new technology for obtaining and processing materials, biotechnology. During this period, in domestic and foreign literature, the organizational and institutional approach of the studying of the problems of the information economy was widespread (Y. Arsky, L. Blyakhman, V.Kushlin, V.Loginov, G.Poppel, B.Rudzitsky, J.Stiglitz and others)

At the sixth stage (the second half of the 1990s - the beginning of 2000), the transition from the post industrial to the information economy is the result of scientific and technical (the formation of the fifth technological order) and the production revolution. The essence of the modern production revolution consists in the transition from the factory-machine system, where workers perform technological, control and logical functions that directly supplement the operation of machines and mechanisms to a system of computerized complexes in which the functions of process control, operational control are transferred cybernetic devices. As a result, the employee is forced out of the direct process of transformation of labor objects and becomes a developer and organizer of production processes .A significant contribution to the development of the methodological foundations of the theory of the information economy and its practical applications were made by scientists who studied certain aspects of the reproduction of scientific and technical information in modern economic systems: E. Bliokov, S. Valdaytsev, G. Vorobiev, A. Dynkin, S.Dyatlov, V.Inozemtsev, V.Maevsky, T.Nikolaeva,

At the moment, the market niche for the products of the "new economy", based on technologies of the sixth technological order, for which the development of bio - and nano - technologies, molecular biology, genetic

engineering, membrane and quantum technologies, photonics are becoming characteristic. The above stages of the formation of the information economy make it possible to single out its system characteristics, which are presented in Table 2.

Table 2.

**System characteristics of information economy**

System Criteria	System characteristics
Production Management System	Reducing the degree of concentration of production.
The role of individuals	Full participation in production processes away from major economic centers
Economic Management System	Increasing the independence of employees, the transformation of organizational units into "functional modules"
System of values	Expansion of social functions of companies
Nature of economic processes	Increase in the degree of intertwining and interaction of economic processes on a global scale
The system of institutional regulation	Internationalization of the system of institutional regulation
Economic benefits	Internationalization of economic benefits
Transnational corporations	The structural globalization of TNCs
Subjects of property	Internationalization of the subject property structure

Source: created by authors based on [3, p. 34]

Informatization of the society, in turn, allowed to form the basis for constructing network relationships covering all spheres of human activity. With the help of information and communication technologies, codified, discrete knowledge (the latest scientific developments, technologies, etc.) quickly spreads over long distances and becomes available to the whole society, regardless of the level of socioeconomic development and technological order.

**Conclusions.** It is important to conclude that the 21st century is rightfully called the century of information, information revolution, which is based on the unprecedented speed and volume of information transfer, the development of new technologies. Information has become one of the leading economic resources, along with labor, capital and natural factors that determine the efficiency of production and the logic of macroeconomic dynamics. The production and consumption of scientific and technical information play a leading role in modern economic systems, predetermining the place of individual countries and regions in the world economic division of labor, causing radical changes in the nature, content and forms of social labor and having a decisive impact on the nature, pace and sources of economic growth.

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Stašys R.,  
Professor,  
Klaipėda University,  
Klaipėda, Lithuania

Žegunis K.,  
Doctorant,  
Klaipėda University,  
Klaipėda, Lithuania

## THE INCENTIVES FOR THE RATIONAL USE OF THE HEALTHCARE SERVICES IN LITHUANIA

**Summary.** *The longer life expectancy and the increased overall number of the non-communicable diseases is one of the main challenges of the health care systems in European Union countries. The early diagnostics and the control of the non-communicable diseases in the primary level may help to reduce the costs of the health care system and to increase the efficiency of the health care management [8].*

*The overall objective of the article is to analyse the health services utilisation data, and to offer the advanced model of health services delivery for selected non-communicable diseases conditions, which based on international evidence have potential to be successfully managed and decrease burden for secondary and tertiary health care levels. Data on health services utilisation are obtained from database of Klaipėda Regional Patient Fund. For the purpose of this research Health Research and Innovation Scientific Centre of the Faculty of Health Sciences, Klaipėda University received data on all outpatient visits to the primary, secondary and tertiary level during the period 2012 – 2015 of all patients enlisted to the Primary health care institutions working under agreement with Klaipėda territorial patient fund. The initial objective was to collect, analyse and summarise the statistic data provided by Klaipėda Regional Patient Fund, focusing Diabetes mellitus which according World health Organisation is one of the most common ambulatory care sensitive chronic conditions and proper management at a primary health care level lead to reduced hospitalisations because of the diabetes mellitus complications.*

**Key words:** *National Government Expenditures and Health, Health general, Health Behavior, Analysis of Health Care Markets, Public health.*

*JEL codes: H51, I10, I12, I11, I18.*

**The role of Primary health care in the management of the noncommunicable diseases.** Incentives of the efficient health care services in Lithuania is major challenge for the Lithuanian health care system. Still much